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Intellectual Property Department  
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EXAMINER

TAYLOR, NICHOLAS R

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/045,213

Applicant(s)

EYITCHISON ET AL.

Examiner

Nicholas R Taylor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/07/2002.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-43 have been examined and are rejected.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 33 recites the limitation "content location system" in "The network architecture of Claim 31 wherein the content location system includes." There is insufficient antecedent basis for this limitation in the claim. For the purpose of this office action, it is assumed that a typographical error has occurred and the claim correctly refers to claim number 32, where the limitation is defined. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Shteyn (US Patent 6,618,764.)

6. As per claim 8, Shteyn teaches a network architecture comprising:

a device layer including, at least one electronic device programmed to communicate using a device native communication protocol, at least one network backbone, each electronic device connected to one of the at least one network backbone; (Shteyn, column 13, lines 23-29, and figure 1)

a device abstraction layer connected to the device layer, the device abstraction layer enabling communication between the at least one device and the device abstraction layer using the device native communication protocol of the at least one electronic device, the device abstraction layer further enabling communication between the device abstraction layer and a higher network layer in a manner independent of device native communication protocols (Shteyn, column 13, line 45 to column 14, line 8.)

7. As per claim 9, Shteyn teaches the system further wherein the device abstraction layer includes:

a set of proxies, each proxy enabling communication between the at least one device and the device abstraction layer using a device native communication protocol, and (Shteyn, column 13, lines 30-45, wherein the created references act as proxies)

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a unified communication interface for communicating between the device abstraction layer and a higher network layer in a manner independent of device native communication protocols (Shteyn, column 13, line 45 to column 14, line 8.)

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-7, 10-12, 15-19, 22-26, 31-37, and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shteyn (US Patent 6,618,764) and Van Der Meulen (US Patent 6,563,769, hereinafter "Meulen".)

10. network architecture for a network of electronic devices comprising:

a device layer having a plurality of electronic devices interconnected using at least one network backbone, wherein the plurality of electronic devices each operate using a device native communication protocol; (Shteyn, column 13, lines 23-29, and figure 1) and

a device abstraction layer which can communicate with the plurality of devices regardless of the device native communication protocol used by any of the plurality of

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devices and which presents a unified communication interface to the content abstraction program interface (Shteyn, column 13, line 45 to column 14, line 8.)

Shteyn fails to teach content accessible to the plurality of electronic devices;

a content abstraction program interface which includes a set of content services for controlling the content accessible to the plurality of interconnected electronic devices; and

the content abstraction program interface communicating with the device layer through the unified communication interface of the device abstraction layer such that the content abstraction program interface abstracts low level device control functions of the plurality of devices into the set of content services which control the content accessible to the plurality of interconnected electronic devices.

Meulen teaches content accessible to multiple electronic devices (Meulen, column 2, line 61 to column 3, line 9) and a content abstraction program interface with includes a set of content services for controlling the content accessible to the plurality of interconnected electronic devices that communicates with the network to access the devices (Meulen, column 3, lines 10-25.) It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Shteyn and Meulen to provide the content abstraction program of Meulen in the system of Shteyn, because doing so would make an easily accessed collection of recordings available (Meulen, column 1, lines 57-60.)

11. As per claim 2, Shteyn-Meulen teaches the system further wherein the content abstraction program interface further includes client applications which implement the content services (Meulen, figures 1 and 3.)

12. As per claim 3, Shteyn-Meulen teaches the system further wherein the client applications of the content abstraction program interface include a content location system for locating content accessible to the at least one electronic device (Meulen, column 4, line 62 to column 5, line 5, and figure 4, specifically the Cataloger.)

13. As per claim 4, Shteyn-Meulen teaches the system further wherein the client applications of the content abstraction program interface include a content change notification system which tracks changes in content and content related information and notifies client applications which are registered with the content change notification system of the changes in content and content related information (Meulen, column 4, line 62 to column 5, line 5, and figure 4, and column 5, lines 35-51, and the process of figure 5.)

14. As per claim 5, Shteyn-Meulen teaches the system further wherein the client applications of the content abstraction program interface include a content engagement system which enables the engagement of content regardless of its location on the network (Meulen, column 4, line 63 to column 5, line 19, and figure 4, specifically the retriever.)

15. As per claim 6, Shteyn-Meulen teaches the system further wherein the content location system and the content engagement application are registered client applications of the content change notification application (Meulen, column 4, line 62 to column 5, line 5, and figure 4, specifically the Cataloger and the Retriever as part of the Collection Manager.)

16. As per claim 7, Shteyn-Meulen teaches the system further including a device abstraction layer which is interposed between the device layer and the content abstraction program interface, the device abstraction layer communicating with the at least one device of the device layer using device native communication protocols and communicating with the content abstraction program interface using a unified communication interface (Meulen, column 3, lines 10-25.)

17. As per claim 10, Shteyn teaches the above, yet fails to teach the system further wherein the higher network layer includes a content abstraction program interface which includes a set of content services for controlling the content accessible to the at least one electronic device, the content abstraction program interface communicates with the device abstraction layer through the unified communication interface of the device abstraction layer.

Meulen teaches content accessible to multiple electronic devices (Meulen, column 2, line 61 to column 3, line 9) and a content abstraction program interface with



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includes a set of content services for controlling the content accessible to the plurality of interconnected electronic devices that communicates with the network to access the devices (Meulen, column 3, lines 10-25.) It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Shteyn and Meulen to provide the content abstraction program of Meulen in the system of Shteyn, because doing so would make an easily accessed collection of recordings available (Meulen, column 1, lines 57-60.)

18. As per claim 12, Shteyn-Meulen teaches the system further wherein the DAL includes a set of proxies for communicating with the devices of the device layer (Shteyn, column 13, lines 30-45, wherein the created references act as proxies)

19. As per claim 13, Shteyn-Meulen teaches the system further wherein low level device control functions which are abstracted by the content abstraction program interface are exposed to permit access to the low level device control functions (Shteyn, column 5, lines 1-13.)

20. As per claim 14, Shteyn-Meulen teaches the system further wherein the exposed low level device control functions include unique device features (Shteyn, column 5, lines 1-13.)

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21. As per claims 15 and 32, Shteyn-Meulen teaches the system further wherein the content abstraction program interface includes a content location system (CLS) for locating content accessible to the plurality of interconnected electronic devices (Meulen, column 4, line 62 to column 5, line 5, and figure 4, specifically the Cataloger.)

22. As per claims 16 and 33, Shteyn-Meulen teaches the system further wherein the CLS includes:

- a file manager which receives event information concerning content and content related information, (Meulen, figure 4, cataloger 350)

- a content repository having a plurality of content file systems, wherein the file manager creates and maintains the content file systems, (Meulen, figure 4, catalog 300)

- a virtual file system, wherein the file manager forwards information from the content repository to the virtual file system which creates and maintains a table of content which includes updated content and content related information, a content reader, wherein the content reader reads the content and content related information from the virtual file system into a content identification (CID) table wherein each piece of content and content related information is associated with a unique content identifier and stored as a unique content entry in the CID table, (Meulen, column 7, lines 23-51, and the complete process of figure 5)

- a content database, wherein the content reader also reads each unique content entry in the CID table into the content database, and (Meulen, figure 4, catalog 300)

a writer for writing selected unique content entries into cached pages which can be accessed by applications using the architecture (Meulen, figure 4, catalog 300, wherein the content entries are cached in the catalog.)

23. As per claim 17, Shteyn-Meulen teaches the system further wherein event information, concerning content and content related information, received by the file manager, is provided to the file manager by a content change notification system (Meulen, column 4, line 62 to column 5, line 5, and figure 4, and column 5, lines 35-51, and the process of figure 5.)

24. As per claim 18, Shteyn-Meulen teaches the system further wherein the CLS further includes a data enhancer which analyzes each unique content entry the CID table to determine its completeness, and wherein the data enhancer supplements each incomplete unique content entry with supplementary content and content related information (Meulen, column 4, lines 38-61 and column 5, lines 19-34, wherein the receiver acts as a data enhancer.)

25. As per claim 19, Shteyn-Meulen teaches the system further wherein the data enhancer supplements the incomplete unique content entries with supplementary content and content related information retrieved through Internet sources (Meulen, column 4, lines 38-61 and column 5, lines 19-34, wherein the receiver acts as a data enhancer.)

26. As per claims 22 and 35, Shteyn-Meulen teaches the system further wherein the content abstraction program interface further includes a content change notification system (CCNS) which tracks changes in content and content related information and notifies client applications which are registered with the CCNS of the changes in content and content related information (Meulen, column 4, line 62 to column 5, line 5, and figure 4, and column 5, lines 35-51, and the process of figure 5.)

27. As per claims 23 and 36, Shteyn-Meulen teaches the system further wherein the CCNS includes,

a client register repository for registering client services and client applications and storing such registration information in a registration database, (Meulen, column 4, lines 26-37 and the entries of figure 3)

an event manager for receiving event information and communicating with the client register repository and using the registration information in the registration database to determine which registered client services and client applications are registered to receive the event information, a content change notification poster, and wherein the event manager communicates with the content change notification poster instructing the content change notification poster to post the event information to registered client services and client applications which have been determined by the event manager to be registered to receive the event information (Meulen, column 8, lines 8-33, specifically the retriever.)

28. As per claim 24, Shteyn-Meulen teaches the system further wherein the CLS is registered with the CCNS as a client application (Meulen, column 4, line 62 to column 5, line 5, and figure 4, specifically the Cataloger as part of the Collection Manager) and wherein the CCNS notifies the CLS of the changes in content and content related information (Meulen, column 4, line 62 to column 5, line 5, and figure 4, and column 5, lines 35-51, and the process of figure 5.)

29. As per claim 25, Shteyn-Meulen teaches the system further wherein the content abstraction program interface further includes a content engagement system (CES) which enables the engagement of content regardless of its location on the network and wherein the CES notifies the CCNS of changes in content engagement status (Meulen, column 4, line 63 to column 5, line 19, and figure 4, specifically the retriever, wherein the retriever also notifies of content changes such as in column 6, lines 5-16.)

30. As per claims 26 and 37, Shteyn-Meulen teaches the system further wherein the content abstraction program interface further includes a content engagement system (CES) which engages content accessible to the plurality of interconnected electronic devices in conjunction with location information provided by the CLS (Meulen, column 4, line 63 to column 5, line 19, and figure 4, specifically the retriever.)

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31. As per claim 34, Shteyn-Meulen teaches the system further wherein the abstraction layer includes a content change notification system which tracks changes in content and content related information and notifies client applications which are registered with the content change notification system of the changes in content and content related information (Meulen, column 4, line 62 to column 5, line 5, and figure 4, and column 5, lines 35-51, and the process of figure 5) and includes a content engagement system which enables the engagement of content regardless of its location on the network (Meulen, column 4, line 63 to column 5, line 19, and figure 4, specifically the retriever.)

32. As per claim 39, Meulen teaches a method for providing content services comprising:

(a) presenting a list of applicable content services; (Meulen, column 3, line 65 to column 4, line 8, and figure 2A)

(b) accessing a list of content services; (c) selecting a content service; (d) initiating a content service request; (e) interpreting the content service request; (Meulen, column 7, lines 52-57)

(f) determining which of the content services and which of the at least one device is appropriate to receive the interpreted request; (g) communicating the interpreted request to the appropriate at least one device and to the appropriate content service; and (h) executing the service request (Meulen, column 8, lines 8-34.)

Meulen fails to teach abstracting lower level device functions in a network of at least one electronic device. Shteyn teaches abstracting device functionality regardless of native protocol (Shteyn, column 13, line 30 to column 14, line 8.) It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Meulen and Shteyn to provide the device abstraction of Shteyn in the system of Meulen, because doing so would allow home networks of different architectures to be integrated with each other (Shteyn, column 13, lines 11-14.)

33. As per claim 40, Shteyn-Meulen teaches the system further wherein (a) presenting a list of applicable content services includes:

locating content and content related information accessible to the network; and displaying the content and content related information in a manner which abstracts low level device functions and displays content services (Meulen, column 3, line 65 to column 4, line 8, and figure 2A, wherein the content names are displayed instead of the device or device functions.)

34. As per claim 41, Shteyn-Meulen teaches the system further wherein (g) communicating the interpreted request includes communicating the request to the appropriate at least one device in a device native communication protocol associated with the appropriate at least one device (Shteyn, column 13, lines 49-64, via references.)

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35. As per claim 42, Shteyn-Meulen teaches the system further wherein (g) communicating the request to the appropriate at least one device in a device native communication protocol associated with the appropriate at least one device is facilitated through the use of communication proxies (Shteyn, column 13, lines 49-64, wherein the references act as proxies.)

36. As per claim 43, Shteyn-Meulen teaches the system further wherein executing the service request (h) includes: engaging the appropriate at least one device in order to execute the service request; and presenting a user with appropriate device functions and content services as needed (Meulen, column 8, lines 8-34.)

37. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shteyn (US Patent 6,618,764) and Van Der Meulen (US Patent 6,563,769, hereinafter "Meulen"), further in view of Hosken (US Patent 6,438,579.)

38. As per claim 20, Shteyn-Meulen teaches the above. However, Shteyn-Meulen fails to teach wherein the CLS further includes a profile database which includes information concerning network user content use patterns and preferences and includes a profile reader which reads the information from the profile database into the writer which writes the profile information into cached pages which can be accessed by applications using the architecture.



Hosken teaches a profile database (Hosken, column 4, lines 44-56, and figure 1B) that tracks user content use patterns and stores these in cached pages accessible by other applications (Hosken, column 9, line 66 to column 10, line 8.) It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Shteyn-Meulen and Hosken to provide the user profile and activity tracking of Hosken in the system of Shteyn-Meulen, because doing so would enable data capture useful in providing particularized media content item recommendations (Hosken, column 3, lines 11-15.)

39. As per claim 21, Shteyn-Meulen-Hosken teaches the system further wherein the profile database is updated with content usage information (Hosken, column 3, lines 11-15) provided by a content engagement system (Meulen, column 4, line 63 to column 5, line 19, and figure 4, specifically the retriever.)

40. Claims 27, 29, 30 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shteyn (US Patent 6,618,764) and Van Der Meulen (US Patent 6,563,769, hereinafter "Meulen"), further in view of Kenner (US Patent 5,956,716.)

41. As per claims 27 and 38, Shteyn-Meulen teaches the above, and also the system further wherein the CES further includes

a control application interface;

an engagement manager having a parser, a scheduler, and an executor;

the parser receives and interprets instructions to engage content and distributes the instructions for further action; the scheduler determines the status of preset engagement instructions and provides instructions based on the preset engagement instructions; and the executor, in response to instructions from the scheduler and parser, communicates the instructions to the device layer such that the content is streamed from the source device to the sink device (Meulen, column 8, lines 8-34, wherein the retriever parses the request, schedules the media to be taken from the content catalog, and executes the request by providing the media, all completed through a control application interface.)

However, Shteyn-Meulen fails to teach:

an activity map; the engagement manager communicates with the activity map to determine the current engagement status of the content and the plurality of interconnected electronic devices; and

where selected source and sink devices are engaged.

Kenner teaches identifying and tracking activity based on current engagement status of multimedia content (Kenner, column 9, lines 55-67.) It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Shteyn-Meulen and Kenner to provide the activity mapping of Kenner in the system of Shteyn-Meulen, because doing so would allow determining the highest usage content (Kenner, column 9, lines 58-60.)

42. As per claim 29, Shteyn-Meulen-Kenner teaches the system further wherein the engagement instructions received by the engagement manager are communicated by the scheduler in response to preset engagement instructions received by the scheduler (Meulen, column 8, lines 8-34.)

43. As per claim 30, Shteyn-Meulen teaches the above, and also the system further wherein the CES includes, in combination,

an engagement manager, an activity map, a profile interface, and a control application interface. (Meulen, column 8, lines 8-34, wherein the retriever parses the request, schedules the media to be taken from the content catalog, and executes the request by providing the media, all completed through a control application interface.)

wherein the CES receives instructions to engage content and in response communicates with the device abstraction layer to engage the content, and (Meulen, column 4, line 63 to column 5, line 19, and figure 4, specifically the retriever.)

However, Shteyn-Meulen fails to teach wherein the CES communicates with the CCNS to report the change in content engagement status. Kenner teaches identifying and tracking activity based on current engagement status of multimedia content (Kenner, column 9, lines 55-67.) It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Shteyn-Meulen and Kenner to provide the activity mapping of Kenner in the system of Shteyn-Meulen, because doing so would allow determining the highest usage content (Kenner, column 9, lines 58-60.)

44. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shteyn (US Patent 6,618,764) and Van Der Meulen (US Patent 6,563,769, hereinafter "Meulen") and Kenner (US Patent 5,956,716), further in view of Hosken (US Patent 6,438,579.)

45. As per claim 28, Shteyn-Meulen-Kenner teaches the above and communicating with the CLS (Meulen, column 4, line 62 to column 5, line 5, and figure 4, specifically the Cataloger.)

However, Shteyn-Meulen-Kenner fails to teach the system further wherein the CES further includes a profile database which is in communication with the engagement manager such that changes in device and content engagement status become part of the profile database, and wherein the profile database communicates with the CLS to generate content profiles.

Hosken teaches a profile database (Hosken, column 4, lines 44-56, and figure 1B) that tracks user content use patterns and stores these in cached pages accessible by other applications (Hosken, column 9, line 66 to column 10, line 8.) It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Shteyn-Meulen-Kenner and Hosken to provide the user profile and activity tracking of Hosken in the system of Shteyn-Meulen-Kenner, because doing so would enable data capture useful in providing particularized media content item recommendations (Hosken, column 3, lines 11-15.)

**Conclusion**

46. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. This includes US Patents: 6,085,236 and 6,574,655.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Taylor whose telephone number is (571) 272-3889. The examiner can normally be reached on Monday-Friday, 8:00am to 5:30pm, with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nicholas Taylor  
Examiner  
Art Unit 2141

  
RUPAL DHARIA  
SUPERVISORY PATENT EXAMINER